

# FEDERAL ENERGY MANAGEMENT ADVISORY COMMITTEE

## MEETING SUMMARY

AUGUST 15, 2005 ~ LONG BEACH, CA

### INTRODUCTION

The Federal Energy Management Advisory Committee (FEMAC) held a public meeting on August 15, 2005, in conjunction with Energy 2005 at the Long Beach Convention Center in Long Beach, CA. FEMAC was established by *Executive Order 13123 – Greening the Government through Efficient Energy Management*. The order directs the committee to provide the Secretary of Energy with input on energy management, including how to improve the use of Energy Savings Performance Contracts, and utility energy efficiency service contracts, improve procurement of ENERGY STAR® and other energy efficient products, improve building design, reduce process energy use, and enhance applications of efficient and renewable energy technologies at Federal facilities.

The Department of Energy's (DOE) Office of Federal Energy Management Programs (FEMP) coordinates the advisory committee; Rick Klimkos, of FEMP serves as FEMAC's Designated Federal Official. Brian Henderson of the New York State Energy Research and Development Authority (NYSERDA) chairs the committee. The advisory committee membership represents a cross-section of interests and experience in the energy field.

[Attachment A](#) Meeting Summary

[Attachment B](#) Public Meeting Flyer, FEMAC members, Executive Summary

[Attachment C](#) Participants

[Attachment D](#) Public Meeting Comments

## ATTACHMENT A

### MEETING SUMMARY

#### OPENING COMMENTS

Mr. Henderson opened the meeting by welcoming the new FEMP Program Manager, Rick Khan. He also welcomed three of the four newly appointed FEMAC members:

- Edward Bradley, Department of Veterans Affairs
- Roger Duncan, Austin Energy
- Brian Jackson, from the U.S. Treasury

In his opening remarks, Mr. Henderson pointed out that FEMAC public meetings provide a forum for obtaining public and private sector input on achieving Federal energy management goals. (FEMAC operates according to procedures established by the *Federal Advisory Committee Act*).

Mr. Henderson led the discussion by summarizing FEMAC's Energy Service Performance Contract (ESPC) Working Group 2004-2005 accomplishments, which include the following actions.

- Prepared *Resolution 04-01*, which recommends the immediate and permanent reauthorization of the Federal Government's use of ESPCs. The committee approved the resolution during FEMAC's June 9, 2004, public meeting.
- FEMAC Chair, Brian Henderson, sent a July 2004 letter to Secretary of Energy Spencer Abraham commending him for his support of the ESPC program along with a copy of the FEMAC-approved *Resolution 04-01*.
- Developed a report, Volume I - *Energy Savings Performance Contracts (ESPC), Report on Authority*. The report was approved by the committee at an August 2004 public meeting and transmitted to the Secretary of Energy in September 2004. Volume I provides a history of the Federal ESPC program and recommendations for the immediate and permanent reauthorization of ESPCs to finance Federal energy management projects.
- Developed a second report, Volume II - *Report on Federal ESPC Management*. The report was completed in May 2005, and submitted to the Secretary of Energy. The report covers FEMAC's recommendations for improving management of the ESPC program.

- Prepared an executive summary of Volume I and Volume II of the ESPC report. The summary was distributed at the Energy 2005 conference and made available to stakeholders with a cover letter signed by Mr. Henderson.
- The ESPC Executive Summary, Resolution 04-01 and Volume I and Volume II of the ESPC report are posted on the FEMP web site for review and downloading at <http://www.eere.energy.gov/femp/about/femac.cfm>. He requested public comments on ESPC Volume II by September 23, 2005
- Received a letter from Richard F. Moorer, Deputy Assistant Secretary for Technology Development for the Office of Energy Efficiency and Renewable Energy on June 9, 2005. In the letter, the Deputy Assistant Secretary thanked Chairman Henderson and FEMAC for their report, findings, and recommendations.

### FEMP LEGISLATIVE UPDATE

Brian Connor, FEMP's Team Lead for Internal Departmental Services summarized key provisions of the *Energy Policy Act of 2005*, which was signed by President Bush on August 8

- Requires Federal agencies to reduce building energy consumption per square foot to 20 percent below 2003 energy use levels by 2015.
- Extends the Energy Savings Performance Contracts program to 2016.
- Directs Federal agencies to purchase either ENERGY STAR® products or products designated as energy efficient by the Federal Energy Management Program.
- Establishes energy efficiency standards for a number of products and equipment for commercial use, including dehumidifiers, distribution transformers, ceiling fans, traffic signals, illuminated exit signs, washing machines, icemakers, refrigerators, freezers, and packaged air conditioning and heating equipment.
- Directs DOE to set new standards for battery chargers, vending machines, and external power supplies.
- Sets additional Federal standards for net metering.
- Requires that new Federal buildings use 30 percent less energy than a building that meets the minimum standards of the International Energy Conservation Code (for homes) or the relevant 2004 standard from the American Society of Heating, Refrigeration, and Air-Conditioning Engineers.

- Requires new Federal buildings incorporate water conservation technologies and meet sustainable design principles.
- Extends daylight saving time. In 2007, daylight saving time will start on the second Sunday in March instead of the first Sunday in April, and will end on the first Sunday in November instead of the last Sunday of October.
- Creates a residential tax credit of up to \$500 for energy efficiency improvements. Measures eligible for the credit include: up to \$200 for installing new exterior windows; up to \$300 for installing a highly efficient central air conditioner, heat pump, or water heater; up to \$150 for installing a highly efficient furnace or boiler; and credits for 10 percent of the cost of insulation, energy-efficient doors, and cool reflective roofs. The credits will be available in 2006 and 2007.
- Extends tax credits for wind, biomass, landfill gas, and other renewable electricity sources.
- Offers new incentives to promote clean, renewable geothermal energy.
- Creates a new tax credit for residential solar power systems.
- Directs the Federal Government to acquire 3 percent of its energy from renewable sources between years 2007 to 2009, 5 percent between the years 2010 to 2012, and 7.5 percent by the year 2013 and beyond.

## **PUBLIC COMMENTS**

Refer to Attachment D for a summary of questions and responses.

## **CLOSING COMMENTS**

Mr. Henderson concluded the public meeting and thanked members for their participation.

ATTACHMENT B

# To all *Energy 2005* Participants

The Federal Energy Management  
Advisory Committee (FEMAC)

*invites you to*

join your colleagues in an open discussion about  
your concerns, experiences, and ideas for  
enhancing energy management in the  
Federal sector.

When: Monday, August 15, 6:00 p.m. to 7:00 p.m.

Where: Long Beach Convention Center, Room 101  
Long Beach, California

FEMAC was established by *Executive Order 13123 – Greening the Government through Efficiency Energy Management*. The committee examines a wide range of energy management issues and technologies affecting the Federal sector and provides independent input to the Secretary of Energy.

For more information about FEMAC, visit [www.eere.energy.gov/femp/about/femac.cfm](http://www.eere.energy.gov/femp/about/femac.cfm)

# Federal Energy Management Advisory Committee

## List of Members

|                                |   |
|--------------------------------|---|
| Mr. Brian Henderson<br>(Chair) | New York State Energy Research and Development Authority  |
| Mr. Jared Blum                 | Polyisocyanurate Insulation Manufacturers Association     |
| Mr. Edward L.<br>Bradley, III  | Department of Veterans' Affairs                           |
| Mr. Roger Duncan               | Austin Energy   |
| Mr. David Dykes                | Southern Company  |
| Mr. Richard Earl               | PB Facilities, Inc., Parsons Brinckerhoff Company         |
| □ Mr. Brian D. Jackson         | Department of Treasury                                    |
| Mr. Erbin Keith                | Sempra Energy Solutions, LLC                              |
| Ms. Vivian Loftness            | Carnegie Mellon University                                |
| Ms. Anne Marie<br>McShea       | New Jersey Board of Public Utilities Clean Energy Program |
| Mr. John D. Mitchell           | ConEdison Solutions                                       |
| Dr. Get Moy                    | Office of the Deputy Under Secretary of Defense           |
| Ms. Mary Palomino              | Salt River Project  |
| Mr. James Rispoli              | Department of Energy                                      |
| Ms. Cynthia Vallina            | Office of Management and Budget                           |

## *Invited Participant*

|                   |  |
|-------------------|--|
| Mr. Terrel Emmons | Office of the Architect of the Capitol |
|-------------------|--|

# Executive Summary

## *Energy Savings Performance Contracting Reports*

### Federal Energy Management Advisory Committee

The Federal Energy Management Advisory Committee (FEMAC) was established by *Executive Order 13123 – Greening the Government through Efficient Energy Management*. The purpose of the committee is to provide the U.S. Department of Energy (DOE) with independent input on enhancing energy management in the Federal Government. The order directs FEMAC to address a range of issues, including how to improve the use of Energy Savings Performance Contracts (ESPCs) and utility Energy Service Contracts (UESCs), improve procurement of ENERGY STAR® and other energy efficient products, improve building design, reduce process energy use, and enhance applications of efficient and renewable energy technologies at Federal facilities.

Committee members are appointed by the Secretary of Energy and include representatives from Federal and state agencies; utility and energy service companies; environmental, energy, and consumer groups; and other energy-related organizations. DOE's Federal Energy Management Program coordinates FEMAC activities.

### Introduction

During FEMAC's first public meeting in October 2000, members identified ESPCs as a priority issue and a vital tool for achieving Federal energy management goals. To address the financing of Federal energy management projects and support implementation of the ESPC program, FEMAC established an ESPC Working Group. The working group examined the full range of issues and benefits associated with using ESPCs to finance Federal energy management projects. This executive summary includes a description of the results of the ESPC Working Group's deliberations and recommendations, which were subsequently approved by the full committee:

- *FEMAC Resolution 04-01* – approved by FEMAC on June 9, 2004
- *ESPC Authority, Volume I* – September 2004
- *ESPC Management, Volume II* – May 2005

**FEMAC Resolution 04-01** recommends the immediate and permanent reauthorization of ESPCs to implement energy and water saving projects in Federal Facilities. In addition, FEMAC members strongly support:

- Expanded authority for stand-alone water conservation projects,
- Further enhancements to the ESPC program to improve its effectiveness,
- Elimination of the statutory language requiring most civilian agencies to send 50 percent of their energy cost savings to the Treasury, and
- Pilot testing the expanded use of ESPCs for non-building applications.

**ESPC Authority, Volume I** This report provides an overview of Federal Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs) as alternative financing tools used by agencies to reduce energy use, modernize aging equipment, reduce maintenance costs, and deploy energy efficiency and renewable energy technologies. ESPCs and UESCs make up more than half of the Federal building energy efficiency investment and FEMAC regards these programs as essential to help the government achieve its 2005 and 2010 energy reduction goals.

FEMAC recognizes the vital role ESPCs and UESCs have played in helping the Federal Government meet or exceed its energy efficiency goals between 1995 and 2000. The Department of Defense (DOD) attributes more than 70 percent of its energy savings to the use of ESPCs and UESCs. Besides helping agencies make progress in meeting Federal energy, water, and emissions-reduction goals, ESPCs also help the Federal Government:

- Achieve healthier, safer, and more productive working conditions,
- Leverage private sector investment for untapped life-cycle cost savings when direct appropriations are not available,
- Increase energy and water efficiency and reduce costs,
- Enhance energy security, and
- Transfer and deploy renewables and innovative efficiency technologies in the Federal sector and stimulate economic development.

As a result of October 1, 2003, sunset of the authorization for the ESPC program, both public and private infrastructure for ESPC fell into jeopardy. Estimates indicate that there were nearly \$500 million worth of energy projects stalled by the lapse in authority. [Following FEMAC transmittal of this report to DOE, consequently, Congress reauthorized the Federal Government's use of ESPCs through October 1, 2006.]



It is the Federal Government's commitment to the economical use of public dollars, protection of the environment, and energy security that make ESPC authority a critical component of a balanced energy management strategy for improved energy efficiency and conservation at Federal facilities. Therefore, FEMAC strongly encourages Congressional action to immediately and permanently restore ESPC authority and Department of Energy (DOE) action to improve ESPC program effectiveness.

ESPC program effectiveness can be improved in a variety of ways and DOE should lead the charge to revise existing ESPC guidance and provide assistance to agencies to implement lessons learned and eliminate barriers to better implementation. Some of the areas for improvement on which DOE should focus its efforts include:

- Better measurement and verification (M&V) procedures,
- Improved options for financing projects, verifying the reasonableness of their pricing, and adding transparency and competition,
- Universal use of experienced project facilitators,
- Quality assurance across all Federal ESPC programs, and
- Further reductions in cost and cycle time of the ESPC procurement process.

***ESPC Management, Volume II*** This second report builds on FEMAC's initial report, providing additional information and an analysis of the history of the ESPC program. More importantly, Volume II describes how the program has been implemented by Federal agencies, highlights the Federal Energy Management Program's (FEMP) critical role in facilitating ESPCs, and provides a listing of FEMAC-recommended improvements to achieve greater program effectiveness.

To date, ESPCs have been implemented by 18 agencies throughout the Federal sector, primarily through DOE FEMP and Department of Defense (DOD) umbrella contracts. The umbrella contracts provide government agencies with an effective, low-risk method for implementing energy savings projects even (and especially) when up-front funding is not available.

For all ESPC projects awarded since FY 1998, the guaranteed energy cost savings are \$3.7 billion, with anticipated net guaranteed cost savings of \$500 million after subtracting payments to the energy services companies (ESCOs) to cover principal, financing costs, and costs associated with performance-period services. The actual net cost savings to the government may be even larger, because ESCOs' savings estimates are usually conservative and the equipment life generally exceeds ESPC contract terms.

ESPCs account for 33 percent of energy use reduction for all agencies over the last four years (FY 1999 through 2003). Although energy reduction data is not yet available for FY 2004, it is anticipated that progress in savings will have

slowed, partly because of the lapse of ESPC authority. There is also concern that agencies may fail to attain the goal of a 30 percent reduction in energy consumption per gross square foot by 2005, as mandated by *Executive Order 13123 – Greening the Government through Efficient Energy Management*. The ESPC financing tool serves as one of the critical strategies for helping Federal agencies build momentum to meet the next goal – a 35 percent reduction in energy use by 2010.

DOE and DOD and the Federal ESPC Steering Committee, with cooperation from the ESCO industry, have led a major effort to improve ESPCs, particularly in the areas of reducing financing costs, determining price reasonableness, and measurement and verification (M&V) of energy and cost savings. FEMAC applauds these efforts and believes that the recent round of improvements will clearly support the case for permanent ESPC authorization.

ESPCs represent a relatively new contracting strategy that requires further enhancement for the concept to mature to its full potential. FEMAC recommends the following eight initiatives to further enhance the ESPC program in order to gain greater acceptance and support.

- ? Consolidate quality assurance and improvement activities under the auspices of the Federal ESPC Steering Committee.
- ? Reduce ESPC financing costs to maximize the benefit/cost impacts.
- ? Strengthen M&V procedures and contract administration.
- ? Periodically assess the performance of ESPC projects.
- ? Reduce the cycle time and transaction costs of entering into ESPCs.
- ? Increase the sharing of information and lessons learned between FEMP, Federal agencies, and state and local governments.
- ? Increase the application of advanced energy efficiency, distributed generation, and renewable energy technologies in ESPCs.
- ? Promote the benefits of ESPCs and encourage permanent authorization.

## ATTACHMENT C

### FEDERAL ENERGY MANAGEMENT ADVISORY COMMITTEE

#### PUBLIC MEETING PARTICIPANTS

##### ***MEMBERS PRESENT***

Mr. Brian Henderson, Chair,  
*New York State Energy Research and Development Authority*

Mr. David Dykes, *Southern Company*

Mr. Ed Bradley, *Department of Veterans' Affairs*

Mr. Roger Duncan, *Austin Energy*

Mr. Richard Earl, *PB Facilities, Inc.*

Mr. Brian Jackson, *Department of Treasury*

Mr. Erbin Keith, *Sempra Energy Solutions*

Ms. Vivian Loftness, *Carnegie Mellon University*

Ms. Anne Marie McShea, *New Jersey Board of Public Utilities Clean Energy Program*

Dr. Get Moy, *Office of the Deputy Under Secretary of Defense*

Ms. Mary Palomino, *Salt River Project*

Ms. Cynthia Vallina, *Office of Management and Budget*

##### ***INVITED PARTICIPANT***

Mr. Terrel Emmons, *Office of the Architect of the Capitol*

##### ***MEMBERS NOT PRESENT***

Mr. Jared Blum, *Polyisocyanurate Insulation Manufacturers Association*

Mr. James Rispoli, *Department of Energy*

### ***DEPARTMENT OF ENERGY OFFICIALS***

Rick Klimkos, *Federal Energy Management Program (Federal Designated Official)*

Rick Khan, *Federal Energy Management Program, Program Manager*

Mike Berry, *Office of Management and Administration, Golden, Colorado*

Brian Connor, *Federal Energy Management Program*

Kim Graber, *Office of Chief Counsel, Golden, Colorado*

Tom Hattery, *Mid-Atlantic Regional Office*

Arun Jhaveri, *DOE Western Regional Office*

Randy Jones, *Denver Regional Office*

Will Lintner, *Federal Energy Management Program*

Claudia Marchione, *Mid-Atlantic Regional Office*

Greg Moore, *Project Management Division, Jefferson County, Colorado*

Schuyler Schell, *Federal Energy Management Program*

### ***NATIONAL LABORATORY REPRESENTATIVES***

Blair Horst, *Lawrence Livermore National Laboratory*

Patrick Hughes, *Oak Ridge National Laboratory*

MaryLynn Placet, *Pacific Northwest National Laboratory*

Bill Sandusky, *Pacific Northwest National Laboratory*

Dale Sartor, *Lawrence Livermore National Laboratory*

### ***PUBLIC PARTICIPANTS***

Roger Blummer, *General Services Administration*

Millard Carr, *Energy MGT Solutions, Inc.*

Tim Davidick, *Booz Allen Hamilton*

Bill Eireb, *SCF&G*

Joe Hoose, *Cool Systems, Inc.*

Don Horn, *General Services Administration*

Richard G. Lubinski, *Think Energy*

Scott McCain, *Booz Allen Hamilton*

Ray Palmer, *Department of Veterans' Affairs*

Steve Sain, *Sain Engineering Associates*

Cheri Sayer, *General Services Administration*

Beth Shearer, *Beth Shearer & Associates Inc.*

Phil Smith, *Sempra Energy*

Mike Weise, *Trane*

John Wilson, *Sempra Energy*

Seema Vyas, *Energetics Inc.*

Mary-Lynn Wrabel, *Energetics Inc.*

## ATTACHMENT D

### Public Meeting Comments

#### *FEMAC Questions and Answers*

#### ***Do the goals of the Energy Policy Act of 2005 supersede the goals of Executive Order 13123 - Greening the Government through Efficient Energy Management?***

Yes.

#### ***What mandates are in place for metering standards?***

Integral metering and energy standards.

#### ***What are FEMAC's next steps for promoting ESPCs?***

FEMAC's ESPC Working Group provided recommendations for improving the ESPC program in their recent report, *ESPC Volume 2: FEMAC Report on Energy Savings Performance Contracts* report. The working group plans to address the recommendations, which include the following measures:

- Consolidate quality assurance and improvement activities under the auspices of the Federal ESPC Steering Committee.
- Reduce ESPC financing costs to maximize benefit/cost impacts.
- Strengthen measurement and verification procedures and contract administration.
- Continue to periodically assess the performance of ESPC projects.
- Reduce the cycle of time and transaction costs of entering into ESPCs.
- Increase the sharing of information and lessons learned between FEMP, Federal agencies, and state and local governments.
- Increase the application of advanced energy efficiency, distributed generation, and renewable energy technologies in ESPCs.
- Promote the benefits of ESPC and encourage permanent authorization.

In addition, the ESPC Working Group is interested in obtaining ESPC data on costs and savings in order to identify and examine lessons learned.

***Can small businesses participate in the ESPC program?***

Small business participation in the ESPC program is challenging primarily because Energy Service Companies collaborate on projects over \$1 million and small business ESPC contracts range from \$10,000 to \$20,000. In addition quality assurance is an important element in the ESPC process and small ESPC contracts are hard to assess under certain procedures. However, the Departments of Defense and State have collaborated in the past with small businesses. Possible opportunities for involving small businesses in ESPC include expanding the ESPC contract for new construction and for a group of small businesses to form teams for small projects totaling \$1 million or more. Small businesses can also collaborate with utility companies.

***What type of performance metrics will help FEMP?***

Metering is critical for verifying Federal energy savings and costs. FEMP can promote metering at Federal facilities by developing tools to assist agencies, including developing a database listing the range of available energy efficient products and emerging technologies, analyzing and developing target metric values for Federal agencies, and developing labels for Federal buildings.

***Federal Government success is measured by budget allocation. Over the past years, the budget for FEMP has decreased indicating that FEMP is not achieving success. What is FEMAC's view on the reduced budget constraints?***

FEMAC is interested in the Department of Energy's budget priorities for FEMP. FEMP is faced with the challenge of identifying how to best optimize the program's resources.

***How does the Federal Government intend to address the new metering requirements?***

Metering is critical to guarantee energy savings. However, Federal and other energy officials view metering negatively as a cost. The perception on metering has to change. FEMAC can encourage officials that metering is beneficial in terms of energy and other Federal facility management savings. Possible strategies include using fixed price guaranteed savings, energy conservation, and retro-commissioning contracts. In addition, the Federal Government can encourage metering for individual projects instead of an entire building, which is more expensive to accomplish. FEMP, with input from FEMAC, can help agencies by developing metric standards for Federal facilities in order to provide Federal officials with a target metric. The new metering requirements are a great opportunity to promote the Utility Energy Service contracts (UESC). Over the past 1-2 years fewer utilities have provided services. Utilizing Utility Energy

Service Contracts (UESC) will help increase utility involvement in Federal energy management projects.

***During the next year, FEMP is expected to lose Regional Office support because the offices will be consolidated in two locations (Golden, Colorado and the National Energy Technology Laboratory). The Regional Offices play an integral part in FEMP's program. I urge FEMP and FEMAC to support these offices.***

FEMAC recently learned about the plan to consolidate the DOE Regional Offices and plans to express their concern to DOE officials